Remarks

As stated above, the applicants appreciate the examiner's thorough examination of the subject application and request reexamination and reconsideration of the subject application in view of the preceding amendments and the following remarks.

Concerning Item 2 of the subject action, the Examiner rejects claims 1-7 and 11-17, under 35 USC §103(a), based on the combinations of the teachings of Matthews et al. (U.S. Patent No. 4,761,807; hereinafter Matthews) and Bartholomew et al (U.S. Patent No.: 6.167,119; hereinafter Bartholomew).

Applicants claim (in currently amended claim 1):

> a method of determining the status of an answered telephone during the course of an outbound telephone call comprising: (A) placing, with an automated calling system, a telephone call to a location having a telephone number that lists a target person for whom a voice pattern template is not defined; (B) upon said telephone call being answered, initiating a prerecorded greeting which asks for the target person; (C) receiving a spoken response from an answering person; (D) performing a speech recognition analysis on said spoken response to determine a status of said spoken response; and (E) if said speech recognition analysis determines that said answering person is said target person, initiating a speech recognition application with said target person.

Applicants respectfully assert that the combination of Matthews and Bartholomew fails to disclose elements (A), (D) and (E) of applicants' claim 1, namely "placing, with an automated calling system, a telephone call to a location having a telephone number that lists a target person for whom a voice pattern template is not defined", "performing a speech recognition analysis on said spoken response to determine a status of said spoken response" and "if said speech recognition analysis determines that said answering person is said target person, initiating a speech recognition application with said target person".

Accordingly, applicants respectfully assert that the combination of Matthews and Bartholomew is not a proper basis for a 35 USC §103(a) rejection, as the combination of the references fail to disclose each and every element of the applicants' claimed invention.

As is known in the art, a voice pattern template is a portion of recorded speech made by a specific user to which incoming speech is compared. *See Bartholomew generally.* When

analyzing incoming speech, if there is a match between the incoming speech and a voice pattern template previously recorded by the specific user, it is deemed that the incoming speech is that of the specific user. Examples of a voice template include a specific user stating their own name or a password. Therefore, "analysis" of speech when using a voice pattern template includes, e.g., comparing a previously-made recording of a specific user stating their name to the current incoming speech of a user stating their name to determine if there is a match.

Concerning the "analysis" disclosed and claimed by the applicants, the subject application discloses that:

> [w]hile there are several distinct methods for analyzing the spoken word and extracting the information necessary to enable the recognition system to convert the speech to word-strings, including Hidden Markov modeling and neural networks, these methods generally perform similar operations. The differences in these methods are typically in the manner in which the system determines how to break the phonetic signal into portions that define phonemes. Generally, a speech recognition system first converts an incoming analog voice signal into a digital signal. The second step is called feature extraction, wherein the system analyzes the digital signal to identify the acoustic properties of the digitized signal. Feature extraction generally breaks the voice down into its individual sound components. Conventional techniques for performing feature extraction include subband coding Fast Fourier Transforms and Linear Predictive Coding. Once the signal has been analyzed, the system then determines where distinct acoustic regions occur. The goal of this step is to divide the acoustic signal into regions that will be identified as phonemes which can be converted to a textual format. *See the subject application, page 2, lines 10-22.*

The applicants respectfully direct the Examiner's attention to the fact that the above-stated passage does not discuss or disclose the use of a voice pattern template in which a portion of recorded speech made by a specific user is compared to incoming speech to identify the specific user.

Concerning the implementation of claim 1 of the subject application, the applicants disclose that:

> [i]n the preferred embodiment, each speech recognition application includes an application file programmed into the speech recognition system 16. Preferably, the series of queries that make up the application is designed to obtain specific information from the respondents to aid in customer or consumer service,

education and research and development of particular products or services or other functions. For example, a particular speech application could be designed to ask respondents specific queries about a particular product or service. The entity that issues the application may then use this information to further develop the particular product or service. An application may also be used to provide specific information to a particular person. *See the subject application, page 12, lines 8-16.*

Accordingly, the applicants describe and envision their technology being used to automate the process of cold-calling actual and potential customers. Therefore, a portion of the calls being made will most likely be directed to people with whom the entity making the call has never contacted. For this portion of the calls, the entity making the call will not possess a voice pattern template for the person to whom the call is being made. Therefore, since such a voice pattern template does not exist, the received speech is processed in accordance with the methodology described at page 2, lines 10-22 of the subject application (*See above*).

Quite differently, Bartholomew relies heavily on the use of voice pattern templates. Concerning the use of the Bartholomew device, Bartholomew discloses that:

> During actual call processing, the voice authentication module 233 receives speech information from the caller. The voice authentication module 233 compares the received information to its <u>stored template or feature data</u> to identify a calling party as a particular subscriber.

> In the case of speech recognition applied to incoming calls, the IP is trained in a different manner. Current speech recognition technology permits recognition with a reasonable degree of certitude based on training from a <u>limited sample</u> of <u>recorded speech of a subject</u>. *See Bartholomew, column 18, lines 32-41, Emphasis Added.*

Accordingly, Bartholomew clearly relies on recoded portions (i.e., templates) of a user's speech to interpret the utterances made by the user. The storage and processing of these templates is integral to the operation of the Bartholomew device. For example, Bartholomew discloses that:

> As previously explained, the IP 23 <u>stores a template or other voice pattern information</u> for each person who has the personalized service in the area that the IP normally services. If the IP 23 does not store the particular template or feature information it needs to process a call, the IP 23 can communicate with a remote IP

23.sub.R to obtain that information. In the present shared line example, the IP 23 will store template or feature data for each subscriber associated with the particular off-hook line.

When the IP 23 receives input speech and extracts the characteristic information during actual call processing, the IP compares the extracted speech information to stored pattern information, to identity and authenticate the particular caller. In the present example, the voice authentication module 233 in the IP 23 compares the extracted speech information to the stored template or feature data for each subscriber associated with the particular off-hook line. This includes the children A and B.

The IP 23 determines if the information extracted from the speech input matches any of the stored template data feature data for an identifiable subscriber. If there is a match, the IP now knows the identity of the calling subscriber. Based on the identification of the calling subscriber, the IP 23 selects a virtual office equipment (OE) number from storage that corresponds to the subscriber. *See Bartholomew, column 38, Lines 29-54, Emphasis Added.*

As stated above, Bartholomew clearly relies on recoded portions (i.e., templates) of a user's speech to determine if an individual on the call is or is not the user who has previously recorded a voice pattern template. Further, in the event that such a template is not locally stored on a particular Bartholomew device, "the IP 23 can communicate with a remote IP 23.sub.R to obtain that information". Therefore, according to Bartholomew, the Bartholomew device either has the template stored locally or, alternatively, contacts a remote device to obtain the template. Further, since Bartholomew "compares the extracted speech information to stored pattern information to identity and authenticate the particular caller", it appears that obtaining the appropriate template is a prerequisite for identifying an "identifiable subscriber".

Further, as the use of templates in Bartholomew is so integral and fundamental to the basic operation of the Bartholomew system, Bartholomew advises the user of their system to answer the telephone in a particular fashion that aids the Bartholomew system in identifying the user. For example, Bartholomew discloses that:

[a] more preferred procedure, pursuant to one feature of this embodiment of the invention, is to instruct all residents at the subscriber premises to always answer the telephone by speaking their own name, such as, "This is Jane" or "This is John," as the case may be. The IP has been provided with voice trained templates to enable identification of the desired virtual OE of each named individual from

such a name utterance. *See Bartholomew, column 43, Lines 37-44, Emphasis Added.*

Accordingly, applicants respectfully assert that the combination of Matthews and Bartholomew is not a proper basis for a 35 USC §103(a) rejection, as the combination of the references fails to disclose each and every element of the applicants' currently amended claim 1. Therefore, the applicants respectfully assert that independent claim 1 is patentable over the combination of cited references. Further, as dependent claims 2-7 depend (either directly or indirectly) upon independent claim 1, applicants respectfully assert that claims 2-7 are also patentable over the combination of cited references.

Additionally, as currently amended independent claim 11 includes elements similar to elements (A), (D) and (E) of currently amended independent claim 1, for the reasons discussed above, the applicants respectfully assert that independent claim 11 is patentable over the combination of cited references. Further, as dependent claims 12-17 depend (either directly or indirectly) upon independent claim 11, applicants respectfully assert that claims 12-17 are also patentable over the combination of cited references.

Concerning Item 3 of the subject action, the Examiner rejects claims 8, 10, 18 and 20, under 35 USC §103(a), based on the combinations of the teachings of Matthews, Bartholomew, and Miner et al. (U.S. Patent No.: 5,652,789; hereinafter Miner).

For the reasons discussed above, the applicants respectfully assert that independent claims 1 and 11 are patentable. As dependent claims 8 and 10 depend upon independent claim 1 and dependent claims 18 and 20 depend upon independent claim 11, applicants respectfully assert that claims 8, 10, 18 and 20 are also patentable.

Concerning Item 4 of the subject action, the Examiner rejects claims 9 and 19, under 35 USC §103(a), based on the combinations of the teachings of Matthews, Bartholomew, and Szlam et al. (U.S. Patent No.: 5,828,731; hereinafter Szlam).

For the reasons discussed above, the applicants respectfully assert that independent claims 1 and 11 are patentable. As dependent claim 9 depends upon independent claim 1 and dependent claim 19 depends upon independent claim 11, applicants respectfully assert that claims 9 and 19 are also patentable.

Concerning Item 5 of the subject action, the Examiner rejects claim 21, under 35 USC §103(a), based on the combinations of the teachings of Matthews, Bartholomew, Miner, and Szlam.

Applicants claim (in currently amended claim 21):

[a] method for determining the status of an answered telephone during the course of an outbound telephone call comprising: (A) placing, with an automated calling system, a telephone call to a location having a telephone number that lists a target person for whom a voice pattern template is not defined; (B) upon said telephone call being answered, initiating a prerecorded greeting which asks for the target person; (C) receiving a spoken response from an answering person; (D) performing a speech recognition analysis on said spoken response to determine a status of said spoken response; and (E) providing at least one of the following responses based on said speech recognition analysis: (a) if said speech recognition analysis determines that said answering person is said target person, initiating a speech recognition application with said target person; (b) if said speech recognition analysis determines that said spoken response indicates that said answering person is not said target person, initiating a prerecorded query asking for said target person, wherein, upon said target person answering said telephone call, said method further comprises initiating a speech recognition application with said target person; (c) if said speech recognition analysis determines that said spoken response indicates that said target person is not present at said location, initiating a prerecorded query asking to leave a message for said target person; (d) if said speech recognition analysis determines that said spoken response is a hold request, entering a wait state to wait for said target person to provide a spoken response to said telephone call, wherein, upon said target person providing a spoken response to said telephone call, said method further comprises initiating a speech recognition application with said target person; (e) if said speech recognition analysis determines that said spoken response is a request for the identity of the entity responsible for the calling system, initiating a prerecorded response indicating the identity of the calling party, repeating said prerecorded greeting which asks for the target person, and repeating step C through step E; (f) if said speech recognition analysis determines that said spoken response indicates that said telephone number is not the correct number for the target person, initiating a prerecorded apology message and terminating said telephone call; and (g) if said speech recognition analysis cannot determine a status of said spoken response, repeating said prerecorded greeting which asks for the target person, and repeating step C through step E.

The Examiner relies on Matthews to teach "placing, with an automated calling system, a telephone call to a location having a telephone number that lists a target person for whom a voice

pattern template is not defined" (i.e., element "A" of currently amended claim 21). Further, the Examiner relies on Bartholomew to teach "performing a speech recognition analysis on said spoken response to determine a status of said spoken response" (i.e., element "D" of currently amended claim 21). For the reasons discussed above, the applicants respectfully assert that independent claim 21 is patentable, as the combination of the teachings of Matthews, Bartholomew, Miner, and Szlam do not disclose each and every element of applicants' currently amended claim 21.

Concerning Item 6 of the subject action, the Examiner rejects claim 22, under 35 USC §103(a), based on the combinations of the teachings of Matthews, Bartholomew, and Szlam.

Applicants claim (in currently amended claim 22):

[a] method of detecting an answering machine comprising: (A) placing, with an automated calling system, a telephone call to a location having a telephone number that lists a target person for whom a voice pattern template is not defined; (B) upon said telephone call being answered, waiting for a predetermined time period for a spoken response; (C) upon receiving said spoken response, playing a prerecorded greeting prompt which asks for said target person; (D) while playing said prerecorded greeting prompt, attempting to detect a further spoken response in excess of a predetermined time parameter; (E) in the absence of detecting said further spoken response during the playing of said prerecorded greeting prompt, initiating a query application; (F) upon detecting said further spoken response during the playing of said prerecorded greeting prompt, terminating the playing of said prerecorded prompt; and (G) indicating that an answering machine has been detected.

The Examiner relies on Matthews to teach "placing, with an automated calling system, a telephone call to a location having a telephone number that lists a target person for whom a voice pattern template is not defined" (i.e., element "A" of currently amended claim 22). For the reasons discussed above, the applicants respectfully assert that independent claim 22 is patentable, as the combination of the teachings of Matthews, Bartholomew, and Szlam do not disclose each and every element of applicants' currently amended claim 22.
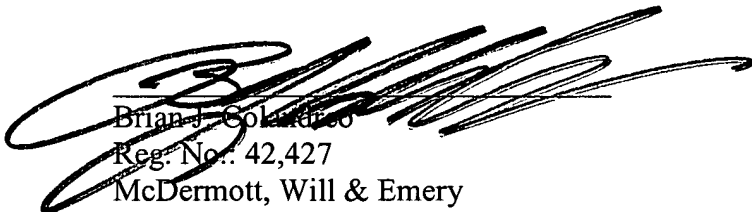
Concerning Item 7 of the subject action, the Examiner rejects claims 23 and 24, under 35 USC §103(a), based on the combinations of the teachings of Matthews, Bartholomew, Szlam, and Brown et al. (U.S. Patent No.: 5,333,180).

For the reasons discussed above, the applicants respectfully assert that independent claim 22 is patentable. As dependent claims 23 and 24 depend (either directly or indirectly) upon independent claim 22, applicants respectfully assert that claims 23 and 24 are also patentable.

No new matter has been added by these amendments. The applicants respectfully assert that the subject application is now in condition for allowance. Please apply any charges or credits to deposit account 50-1133.

Respectfully submitted,

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Brian J. Colandreo
Reg. No.: 42,427
McDermott, Will & Emery
28 State Street
Boston, MA 02109
V: (617) 535-4083
F: (617) 535-3800
E: bcolandreo@mwe.com